

In the Claims:

1-15. (Cancelled)

16. (Currently Amended) A method of forming a semiconductor device, the method comprising:

forming a gate electrode having sidewalls on a region in a substrate, the region in the substrate having a first conductivity type;

forming a notched spacer alongside the gate electrode sidewalls, ~~sidewalls such that a thickness of the notched spacer extending alongside the gate electrode sidewalls has~~ having a first thickness in an upper portion and [[has]] a second lesser thickness less than the first thickness in a lower portion adjacent to a surface of the substrate thereby forming a notch in the ~~[[a]] lower portion of the notched spacer, adjacent to the surface of the substrate,~~ the notched spacer comprising a single homogenous layer;

performing a first ion implant at an oblique angle to the substrate so as to implant ions beneath the gate electrode wherein the gate electrode and the notched spacer act as masks during the first ion implant, the first ion implant using ions of the first conductivity type; and

performing one or more second ion implants using ions of a second conductivity type.

17. (Currently Amended) The method of claim 16, wherein the step of forming a notched spacer comprises forming a first layer and a second layer, forming a mask out of the second layer on the first layer, wherein an ~~such that the~~ upper portion of the first layer alongside an upper portion of at least one sidewall of the gate electrode is covered by the mask, and wherein ~~[[and]]~~ a lower portion of the first layer ~~at the corner formed between~~ the surface of the substrate and a

lower portion of the at least one ~~[[the]]~~ sidewall of the gate electrode is not covered by the mask, isotropically etching the first layer such that the lower portion of the first layer ~~along a surface of the substrate next to the gate electrode not covered by the mask~~ is partially removed, and removing the mask.

18. (Original) The method of claim 17, wherein the mask is formed of silicon nitride.

19. (Original) The method of claim 17, wherein the mask is formed of silicon oxide.

20. (Cancelled)

21. (Previously Presented) The method of claim 16, wherein the step of performing one or more second ion implants is performed at an angle normal to a surface of the substrate.

22. (Original) The method of claim 16, wherein the notched spacer is formed of silicon dioxide.

23. (Original) The method of claim 16, wherein the notched spacer is formed of silicon nitride.

24. (Currently Amended) A method of forming a semiconductor device, the method comprising:

forming a gate electrode over ~~[[in]]~~ a region on a substrate, the region of the substrate having a first conductivity type;

forming a first layer having a first thickness over the substrate and the gate electrode;

forming a second layer over the first layer;

removing a portion of the second layer such that a spacer mask is formed on the first layer on a sidewall ~~[[side]]~~ of the gate electrode, wherein an upper portion of the first layer remains remaining covered by the spacer mask, and wherein ~~[[and]]~~ a lower portion of the first layer extending along a ~~[[the]]~~ surface of the substrate and extending up a ~~[[the]]~~ lower sidewall portion of the sidewall of the gate electrode is being exposed;

isotropically etching the first layer to form a notched spacer in the first layer, wherein the spacer mask acts as a mask, and wherein the etching partially removes the lower portion of the first layer thereby forming a notch in the notched spacer such that the notched spacer has having a second thickness in a direction substantially orthogonal to the sidewall of the gate electrode along the surface of the substrate that is less than the first thickness; ~~wherein the spacer mask acts as a mask, and wherein the etching removes at least a portion of the uncovered first layer along a surface of the substrate and in the corner formed by the sidewall of the gate electrode and the surface of the substrate, thereby forming a notch in the notched spacer in the corner formed by the sidewall of the gate electrode and the surface of the substrate~~

removing the spacer mask;

performing a first ion implant after the spacer mask has been removed, the first ion implant using ions of the first conductivity type implanted at an oblique angle to the surface of the substrate and implanting ions beneath the gate electrode; and

performing one or more second ion implants using ions of a second conductivity type.

25. (Cancelled)

26. (Original) The method of claim 24, wherein the step of performing one or more second ion implants are performed at an angle normal to the surface of the substrate.
27. (Original) The method of claim 24, wherein the first layer is formed of silicon dioxide.
28. (Original) The method of claim 24, wherein the second layer is formed of silicon nitride.
29. (Withdrawn) A method of forming a semiconductor device, the method comprising:
- forming a gate electrode on a region in a substrate, the region in the substrate having a first conductivity type;
 - forming a first layer over the substrate and the gate electrode;
 - forming a second layer over the first layer;
 - removing a portion of the second layer such that a spacer mask is formed on the first layer on a side of the gate electrode;
 - etching the first layer to form a notched spacer wherein the spacer mask acts as a mask, the etching removing substantially all of a portion of the first layer along a surface of the substrate adjacent the gate electrode;
 - removing the spacer mask;
 - performing a first ion implant after the spacer mask has been removed, the first ion implant using ions of the first conductivity type; and
 - performing one or more second ion implants using ions of a second conductivity type.

30. (Withdrawn) The method of claim 29, wherein the step of performing a first ion implant is performed by implanting ions at an oblique angle to the substrate such that impurities of the first conductivity type are implanted in the substrate below the gate electrode.

31. (Withdrawn) The method of claim 29, wherein the step of performing one or more second ion implants are performed at an angle normal to the surface of the substrate.

32. (Withdrawn) The method of claim 29, wherein the first layer is formed of silicon dioxide.

33. (Withdrawn) The method of claim 29, wherein the second layer is formed of silicon nitride.